A GLANCE AT THE FLORA OF MOUNT WILSON.

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The Mount Wilson platform which is 83 miles from Sydney and 3,478 feet above the sea-level, stands at the termination of Bell's line from Richmond, and is about five miles westward of the mountain from which it takes its name. As, however, the country between the platform and the mountain is very rugged and impracticable, the road is somewhat circuitous and about ten miles in length. In travelling towards the mountain, the formation is for the most part of Hawkesbury sandstone, and the plants are to the general observer rather uninteresting when compared with the luxuriant vegetation of the disintegrated trap. The Eucalypts, so far as I had an opportunity of examining them along the road, are those known by the popular names of "Peppermint" (*E. piperita*, Sm.), "White Gum" (*E. hæmastoma*, Sm.), "Mountain Ash" (*E. Sieberiana*, F. v. M.), "Mountain White Gum" (*E. pauciflora*, Sieb.), "Stringy Bark" (*E. capitella*, Sm.), and a "Scrubby Gum" (*E. stricta*, Sieb.). With the exception of the last, which forms brushes on the elevated parts of the Blue Mountains, the other species are trees of moderate size, none of them attaining that which they do in more favourable localities. The Proteaceæ are well represented by numerous species of *Hakea*, *Persoonia*, *Grevillea*, *Banksia*, *Symphyonema*, *Isopogon*, *Petrophila*, *Conospermum*, *Lomatia*, *Lambertia*, and the far-famed *Telopea* or Waratah. The fruits of *Hakea* and *Persoonia* seemed larger than those on similar species in the low country, one of the former (apparently *H. gibbosa*, Cas.), measuring 2½ inches in length, and more than 5 inches in circumference; whilst *Grevillea laurifolia* (Sieb.), with its trailing branches and crimson flowers appeared in large patches here and there by the road side. Of the Rutaceæ, I noticed the two forms of *Boronia* which by some are referred to *B. pinnata*

(Sm.), and also *Eriostemon obovalis* (A. Cunn.). The latter has very delicate flowers, which have sometimes been found double. As the season for flowering had nearly past (December), the Leguminous shrubs were not so conspicuous as they had been a month or so earlier; but the species of *Daviesia*, *Dillwynia*, *Mirbelia*, *Indigofera*, *Pultenæa*, *Gompholobium*, and *Sphærolobium*, were evidently very numerous; whilst five or six kinds of *Acacia* were in fruit. The interesting terrestial Mistletoe, *Atkinsonia ligustrina*, F. v. M., (a plant ever to be associated with the name of the excellent lady who did so much to develop the natural history of the Kurrajong), was abundant on the sandstone. By some botanists, this plant has been supposed to germinate on the roots or decaying branches of trees, but so far as could be ascertained, *A. ligustrina* is an independent terrestrial shrub. The flowers are of a yellow or orange colour, the leaves occasionally opposite, and the fruit 8-ribbed, protruding into deep furrows, so as to give it the appearance of being 8-celled. In addition to the trees of the Myrtaceæ already mentioned, several species of *Leptospermum*, *Callistemon*, *Bæckia*, *Darwinia*, and *Kunzea* were seen on the ridges, but none of them seemed to differ from the species near Sydney. *Tetratheca ericifolia* (Sm.), with which Baron Mueller unites *T. thymifolia* (Sm.), and *T. pilosa*, (Labill.), is on the mountains a solitary representative of an order widely distributed in Western Australia; whilst *Bauera rubioides* (Andr.), of the Saxifrageæ, and *Monotaxis linifolia* (Brongn.), of Euphorbiaceæ, were collected in moist places. Of the Santalaceæ, *Leptomeria acida* (R. Br.), *Omphacomeria acerba* (A. DC.), and *Choretrum Candollei* (F. v. M.), were frequent, as well as several species of the Goodeniaceæ, *Goodenia barbata* (R. Br.), *G. bellidifolia* (Sm.), *G. heterophylla* (Sm.), *Dampiera stricta* (R. Br.), and *D. Brownii* (F. v. M.); whilst of the Epacrids, *Epacris*, *Leucopogon*, *Monotoca*, and *Brachyloma* were represented by a few species. The terrestrial Orchids had nearly passed away, but I was able to recognise *Prasophyllum flavum* (R. Br.), (a much larger plant than that figured by Mr. Fitzgerald), *P. nigricans* (R. Br.), *Orthoceras strictum* (R. Br.), *Cryptostylis leptochila* (F. v. M.), *Dipodium punctatum* (R. Br.), *Gastrodia sesamoides* (R. Br.), *Microtis porrifolia* (Spreng.), *Chiloglottis diphylla* (R. Br.), and *Thelymitra venosa* (R. Br.), the last of which was in full flower. Mr. J. D. Cox informed me that he had noticed rather earlier several species of *Diuris*, *Caladenia &c.*, *&c.* (1). *Dianella cœrulea* (Sims.), *Cœsia parviflora* (R. Br.), *Thysanotus tuberosus* (R. Br.), *Geitonoplesium cymosum* (A. Cunn.), *Sowerbœa juncea* (Sm.), and *Stypandra cœspitosa* (R. Br.). were the only plants of the Lily family which I observed. The following species also may be enumerated, *Ionidium floribundum* (Walp.), of the Violaceæ, *Trachymene ericoides* (Sieb.) and *T. Billardieri* (F. v. M.) of the Umbelliferæ, *Lobelia gibbosa* (Labill.) of the Campanulaceæ, *Mitrasacme pilosa* (Labill.), of the Loganiaceæ, *Sebœa ovata* (R. Br.) of the Gentianeæ, *Pomaderris ledifolia* (A. Cunn.) of the Rhamneæ, and several species of *Hibbertia* of the Dilleniaceæ. The composites are numerous, but the most remarkable were *Cassinia denticulata* (R. Br.), *C. aurea* (R. Br.), *Humea elegans* (Sm.), *Senecio australis* (Willd.), and *Helichrysum elatum* (A. Cunn.). The native grasses did not appear to be abundant, and the only species which I collected were *Microlœna stipoides* (R.Br.), *Anisopogon avenaceus* (R. Br.), *Cinna ovata* (Kunth.), *Amphipogon strictus* (R. Br.), *Danthonia semiannularis* (R. Br.), and *Poa cœspitosa* (Forst.). Not far from the Road, I saw *Gleichenia circinata* (Sw.), and the Lycopods *Lycopodium densum* (Labill.), and *Selaginella uliginosa* (Spreng.), but these were not so fine as some I have found in the Manly swamps. Before I pass away from the Hawkesbury Sandstone, two species of *Casuarina* should be noticed, *C. nana* (Sieb.), and *C. distyla* (Vent.), both dwarfed plants, and also a *Frenela*, which Baron von Mueller considers a diminutive form of *F. Muelleri* (Parlat.), a pine found near Sydney and plentiful on the banks of George's River.

As we reach the foot of Mount Wilson about 300 or 400 feet below the summit or table-land, the character of the vegetation undergoes a remarkable change, and the traveller, as he ascends the Zig-Zig, passes through an avenue of trees and shrubs differing materially from those on the sandstone, though it must be observed that some of the plants which I have mentioned are common to that and the trap formation. Nothing can exceed the verdure and beauty of the scene, and though the species are for the most part common to Mount Wilson and Mount Tomah, yet no part of the Blue Mountains seems equal to the former in its natural features, or its suitability for the cultivation of European trees, shrubs, fruits, and grasses. On both sides of the road, the beautiful *Prostanthera lasiantha* (Labill.) was in full bloom. This is the largest of Labiatcs, and from the scent of its foliage is sometimes called the "Mint Tree," forming a pleasing relief to the darker shades of the shrubs, and a contrast to the semi-tropical character of the Tree-ferns which now begin to appear in great abundance. The fertility of the soil at Mount Wilson is evidenced not only by the indigenous vegetation, and the vigorous growth of cultivated plants; but the rapid way in which European and Asiatic weeds are spreading is also an indication of the fact. *Hypochæris glabra* (Linn.), *Galinsoga parviflora* (Cav.), *Siegesbeckia orientalis* (Linn.), and *Silene gallica* (Linn.), are following the steps of cultivation; whilst the grasses *Poa pratensis* (Willd.), *Dactylis glomerata* (Willd.), *Cynosurus cristatus* (Willd.), as well as several foreign clovers, have already established themselves on the Mount.

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(1) Mr. J D. Cox has lately sent me specimens of *Dendrobium striolatum*, *Prasophyllum fimbriatum*, *Pterostylis parviflora*, *P. pedunculata*, *P. nutans*, *Cryptostylis erecta*, *Acianthus fornicatus*.

The Botany of Mount Wilson is very similar to that of Tomah, and as the observer views the gigantic Eucalypts, the graceful Tree-Ferns (*Dicksonia antarctica*, *Alsophila Australis*, and *A. Leichhardtiana*), the robust climbers, and the epiphytal orchids of the sombre woods, he is forcibly reminded of Allan Cunningham's trip to Mount Tomah in 1823, and of the plants which that eminent Botanist discovered there (See *Hooker's Journal of Botany*, Vol. 4, p. 285). Cunningham tells us, that owing to the weakness of his horses and the difficulty of the track then recently found by a surveyor, he did not proceed to Cox's River as he had originally intended; but, after having advanced a few miles further, he returned to his encampment at Tomah, which he adds, "from the permanency of its shade and the general humidity of the atmosphere on its elevated summit, rendered the peculiar character of its vegetation most interesting to him." After the lapse of more than half a century, little can be added to the account which Cunningham has furnished of the germination of *Quintinia Sieberi* (A. DC.) on the caudices of *Dicksonia antarctica*, of the eccentric climbing rooted-stemmed plant *Fieldia australis* (A. Cunn.), and the stupendous size and marvellous contortions of the large climbers; but, in the progress of science, especially through the labours of Baron F. von Mueller, the Eucalypts to which he refers have been duly classified, whilst many of the plants, which he knew but imperfectly, have been reduced to their proper places in the systematic arrangement.

The highest trees on Mount Wilson are probably the Stringy Barks (*E. macrorhyncha*, F. v. M.), some of which are probably 150 feet high, with a circumference of 22 feet at the lower part of the butt. This species, though allied to the other Stringy Barks (*E. eugenioides*, Sieb. and *E. capitella*, Sm.), is certainly distinct in the shape of its fruit, the quality of its wood, and its peculiar habit, rising as it does to a great height without sending forth a branch. Next in point of size are the "Messmate," and the Mountain form of the "Manna Gum" (*E. amygdalina*, Labill. and *E. viminalis*, Labill.). These trees have some points of resemblance, for the young trees have opposite sessile leaves; and as the Messmate is not uniformly half-barked, they may be mistaken one for the other without careful observation. The Messmate, however, differs in the ovate shape of the anthers, the divergent venation of the leaves, the crowded umbels of the flowers, and the usually inserted valves of the fruit. In the Manna Gum, the umbels have only three flowers, and the valves of the fruit are exserted or protrude. The wood of the Stringy Bark and of these Eucalypts is not esteemed either for practical purposes or for firewood. In the deeply shaded forests, *Ceratopetalum apetalum* (Don), or as it is sometimes called "Gigantic Christmas Bush," grows much larger than it does near Sydney, and under the name of "Coachwood" or "Lightwood," it is used for many industrial purposes. The same may be said of *Acacia melanoxylon* (R. Br.), and *A. elata* (A. Cunn.), which rise to a considerable height, and afford excellent timber for carpentry and cabinet work. *Doryphora sassafras* (Endl.) is often characterised as a beautiful aromatic tree. Its wood, indeed, is fragrant but not durable, and an infusion of its bark is used as a tonic. *Quintinia Sieberi* is also a fine ornamental tree, growing in company with the preceding trees, and its wood is useful for cabinet work. *Eugenia Smithii* (Poir.) or the "Myrtle," rises to the height of 40 or 50 feet in the chocolate soil: its timber is hard and close-grained, and useful for carpentry, handles, and staves. *Myrsine variabilis* (R. Br.), and *Hedycarya angustifolia* (A. Cunn.), though merely shrubs in many parts of the colony become trees of some size in the fertile soil of Mount Wilson, but their wood, especially that of the latter, is soft and of little value. *Fieldia australis*, which Cunningham first noticed at Mount Tomah, is very abundant on Tree-ferns and other trees; and the climbers of which he speaks in general terms appear to be *Vitis hypoglauca* (F. v. M.), *Lyonsia straminea* (R. Br.). *L. reticulata* (F. v. M.), and *Tecoma australis* (R. Br.), *Marsdenia rostrata* (R. Br.), and *Tylophora barbata* (R. Br.), are smaller and twining plants. Some of the climbers seem to kill the young trees on which they ascended to others, and hang down from lofty branches as if they had attained their position by some unseen agency. In the shady woods I noticed the "Kangaroo Apple" *Solanum aviculare* (Forst.), *Coprosma Billardieri* (Hook.), sometimes called "Currant," and *Smilax australis* (R. Br.), the "Australian lawyer." Of the epiphytal Orchids, *Dendrobium teretifolium* (R. Br.), *D. pugioniforme* (A. Cunn.), and *Sarcochilus falcatus* (R. Br.) were the only species which I was fortunate enough to see, but no doubt many more remain to be observed. I picked up on the ground a fragment of *Viscum articulatum* (Burm.) which must have fallen from one of the lofty trees, and also some leaves, as they appeared to be, of *Litsœa dealbata* (Nees.), *Elœocarpus holopetalus* (F. v. M.), and *Banksia integrifolia* (Linn.), but of these better specimens are needed for identifying the species.

As Mr. P. N. Trebeck, in the Proceedings of the Linnean Society, Vol. I. pt. 2, (1886), has given a full account of the ferns of Mount Wilson, I need only add a few species which do not appear in his list. These are—

Lomaria Capensis (Willd.)
L. Patersoni (Spreng.)
Aspidium Capense (Willd.)
Pteris umbrosa (R. Br.)
Lindsæa linearis (Sw.)
Polypodium serpens (Forst.)
Trichomanes venosum (R. Br.)
Tmesipteris Tannensis (Bernh.) Lycopod.

In concluding this imperfect sketch of the *Flora* of Mount Wilson, I am aware that many species remain to be added to the list, and that there is yet a wide field for the discovery of minute Ferns, Lycopods, Mosses, Lichens, and Fungi. From what I saw of the lower Cryptogams, I believe that observers will add many species of the smaller forms to the lists already published by Baron F. von Mueller.